Guidelines for laboratory contingency planning (LCP)

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Laboratory contingency planning (LCP) is designed to mitigate the risk of system breakdown and unacceptable service unavailability in case of a crisis. It is a means to ensure that the laboratory is able to operate effectively and without excessive interruption or delay during the outbreak of a disease such as Classical swine fever (CSF). A LCP ensures that a lab is able to handle a contingency within a minimum of time, with minimum disruption and at minimum costs. Furthermore, it allows a laboratory to guarantee that the necessary quality standards will also be met in a crisis situation and serves as a reference manual to all (laboratory) personnel in case of a contingency. In addition, a LCP may prove to be a valuable tool to present a laboratory’s preparedness and capability to external visitors and auditors (such as e.g. missions from the FVO or the European Commission). Therefore, it is essential that a LCP is written in a short, simple, yet precise manner and is also comprehensible to people not belonging to the lab themselves.

Thorough planning of all procedures and technical measures is needed well in advance of a contingency. It is vital that the organization takes the development and maintenance of the LCP seriously. A contingency can affect the laboratory at any time and this includes the next 24 hours! The LCP should be developed by a team representing all functional areas (e.g. dispatching, diagnosticians, biosafety, but also administration and telecommunication/IT staff).

The issues and questions mentioned within these guidelines are neither complete, nor do all of them fit to each laboratory, nor is the order in which they are presented here mandatory in any way. They cover the main necessary considerations in a comprised version and are intended to be a help to those in the process of preparing or revising their laboratory contingency plan(s).

The following key issues should be addressed:

1. **Information on the disease background**

A passage containing relevant information on Classical swine fever could be included. Give details on the virus and its properties, routes of transmission, the different courses of disease including clinical signs and so on.

2. **Frame of the LCP in connection to the National CP**

Article 22 of Council Directive 2001/89/EC on Community measures for the control of classical swine fever requires each Member State to draw up a contingency plan specifying the national measures to be implemented in the event of an outbreak of classical swine fever. “This plan shall allow access to facilities, equipment, personnel and all other appropriate materials necessary for the rapid and efficient eradication of the outbreak.” Criteria and requirements relating to contingency plans are laid down in Annex VII of the above mentioned Council Directive. Amongst others it is stated that:
“d) provision must be made for appropriate resources to be available to ensure a rapid and effective campaign, including laboratory staff, equipment and infrastructure;
e) an instruction manual must be provided. It must give a full practical description in detail of all the procedures, instructions and measures to be employed in the event of an outbreak of classical swine fever;”

Here, no specific reference is made to a laboratory contingency plan. Each laboratory has to line out where its LCP fits into the framework of the national CP. It has to define where the superordinate CP ends and the LCP begins. Within this context it is important to clearly define the chain of command, to define the contact persons within the veterinary services and to depict the flow of information.

3. Information and details on the laboratory
(e.g.: Name, location, functions, contact, other departments/laboratories)

Definitions
(e.g.: What is a crisis? When does the LCP come into action? Who takes the lead in the crisis management? Who decides on which other activities to be scaled down?)

Space
(e.g.: How will additional space be gained? What rooms will be needed? Which equipment will be needed in which room?)

Personnel
(e.g.: How will personnel be mobilised and/or recruited? How do you ensure that personnel is adequately trained? How will people be assigned to teams? Is the obligation for work after normal working hours part of the contract?)

Methods and Procedures
(e.g.: Which diagnostic tests will be used? What is the maximal capacity of the lab per day/week? How much time is needed for each test? Detailed description of each method; Flow charts depicting the process from arrival of the sample until diagnosis including receipt, preparation, testing and storage; What happens in case of an inconclusive result? References to the QA numbers used for the specific tests.)

Supplies: Equipment, Reagents, Consumables
(e.g.: Which additional equipment could be used? How much stock will be needed to cover the first weeks during an outbreak? How can the stock of reagents and test kits be enlarged quickly? How much reagents/test kits would be needed in a worst case scenario? Will a contract with suppliers be of help?)

Transport
(e.g.: How will transport of samples be handled? Will additional laboratories be involved to handle large number of samples? Where will samples be stored that arrive during the night?).

Financial issues
(e.g.: Contracts with government? Who will pay for additional personnel?)

Revision
(e.g.: Who is responsible for updating the information in the LCP and revising it? How often shall this be done?)

Databases
(e.g.: Names, addresses and phone numbers of personnel; Authorisation, responsibilities and level of training of personnel; Suppliers of reagents and consumables; cell phone numbers of the central persons)
Appendices
(e.g.: Legislation; Diagnostic Manual of the EC; OIE Manual; Transport regulations – ADR, IATA, etc.; Maps of the laboratory complex)

Further information
(e.g.: Laboratory experience; Participation in proficiency testing; Laboratory exercises; Publications, etc.)

4. Evaluation and reporting is of very high importance for immediate and later use
   a. The evaluation has to be done as soon as possible after the exercise, while everything is still fresh in everyone’s mind.
   b. Focus on the pre-determined goals, but take all other issues that come about into consideration as well.
   c. The contribution of all participant is important, making the original report rather “raw” with comments and contributions (may be complicated to compile; should be in the national language to allow everybody to contribute; consider seriously what is written by the daily users).
   d. Bottlenecks must be taken seriously! If the main problem is shortage of lab ware, something must be done, otherwise the enthusiasm will disappear.
   e. After the report a meeting is conducted, including all involved locations, technicians, leaders and the director.
   f. A condensed version, stating mainly the conclusions, submitted to the authorities and the stakeholders is useful.
   g. It may be useful to have an auditing team from another NSFL laboratory to review the exercise. Both sides can learn from this.

It shall be pointed out that there is no “generic template” LCP, which could be used in every laboratory, but each lab has to take into consideration e.g. its special situation (personnel, space, methods, departments), functions, duties and obligations!

After establishing a LCP it is essential to test its functionality and detect its flaws and shortcomings already during peacetime. Here a laboratory exercise could be a very helpful tool!
Furthermore, each LCP has to be updated and revised regularly. Not only should changes within the laboratory itself (change of personnel and telephone numbers, change of diagnostic methods used, change of suppliers, etc.) be addressed, but also the epidemiological situation within the country should be kept in consideration.

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References:
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